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JASIC®



Handheld Laser Welding & Cleaning Systems

www.jasictech.com









JASIC’s Story

JASIC is an international welding manufacturer, and its products were used in some of the most ambitious projects in modern history such as the Beijing Bird's Nest Stadium.

Founded in 2005, the company has grown into an international business with a $200 million annual turnover* and over 1000 staffs worldwide. With 3 R&D centres, JASIC has more than 130 R&D personnel and industry-leading test laboratories certified by TÜV Rheinland and CSA.

Exporting to over 80 countries and regions, JASIC has an annual production capacity of 1 million machines.

JASIC is driven by its passion for the world’ s welding needs, and strives to deliver reliable and ecological solutions.

** Data of 2021 financial year*



2005

09.2005
Founding of JASIC

2006

09.2006
Expanded to Australia

2007

04.2007 Expanded to Russia
Mass adaptation of IGBT technology in JASIC welding machines

06.2007 JASIC welding machines were used in the construction of Beijing Bird Nest Stadium

12.2007 JASIC welding machines China Pavilion, World Expo 2010.

2009

10.2009
Obtained CSA Certificate

2010

06.2010
Expanded to Thailand

2011

01.2011
Expanded to Vietnam

03.2011 Company Listed on Shenzhen Stock Exchange

2012

02.2012 Expanded to the UK
11.2012 JASIC Technologies America, Inc. established

03.2012 New company head quarter established

03.2012 Integral test laboratory established

2017

12.2017 Obtained TÜV Rheinland Witness Testing Laboratory Appointment Certificate

2018

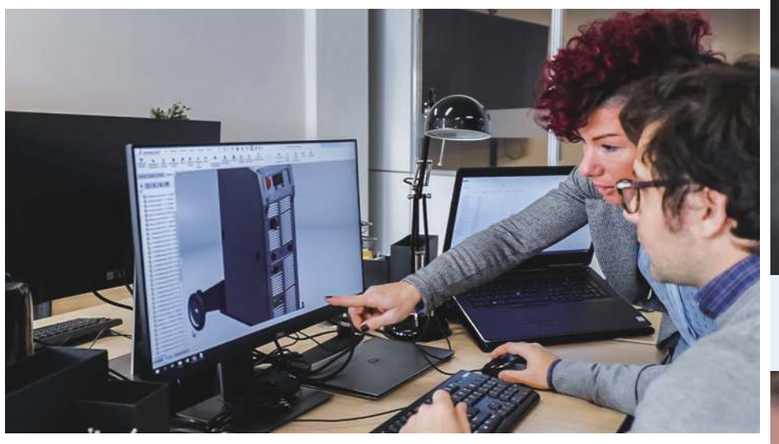
04.2018 JASIC India founded
05.2018 JASIC Tech Europe estabilshed

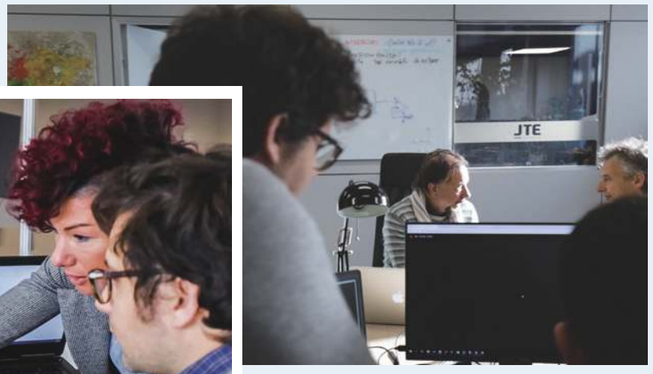
2021

Reached $200 million milestone in annual turnover











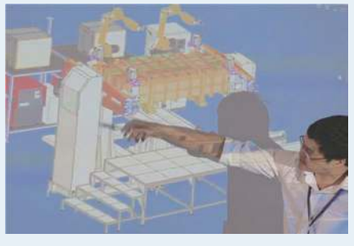


R&D Strength

As an innovation-driven company, we spend 5% of our annual revenue into research and development. So far we' ve set up 3 R&D centers. With currently 250+ patents and 150+ R&D staffs, we are determined to have R&D and innovation taking the center stage in our company' s growth.



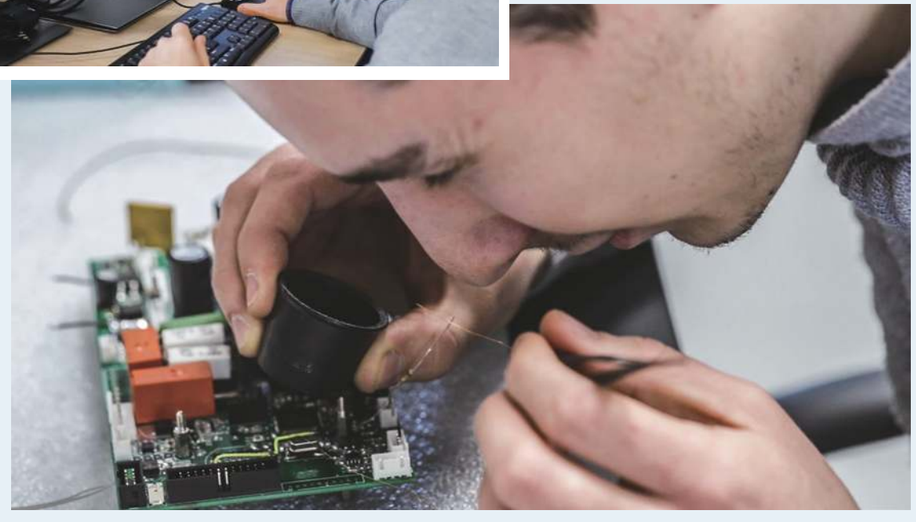
Professional R&D staffs



Technical platforms



Industry-leading test labs



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3 In 1 - Welding/Cutting/Cleaning Machines

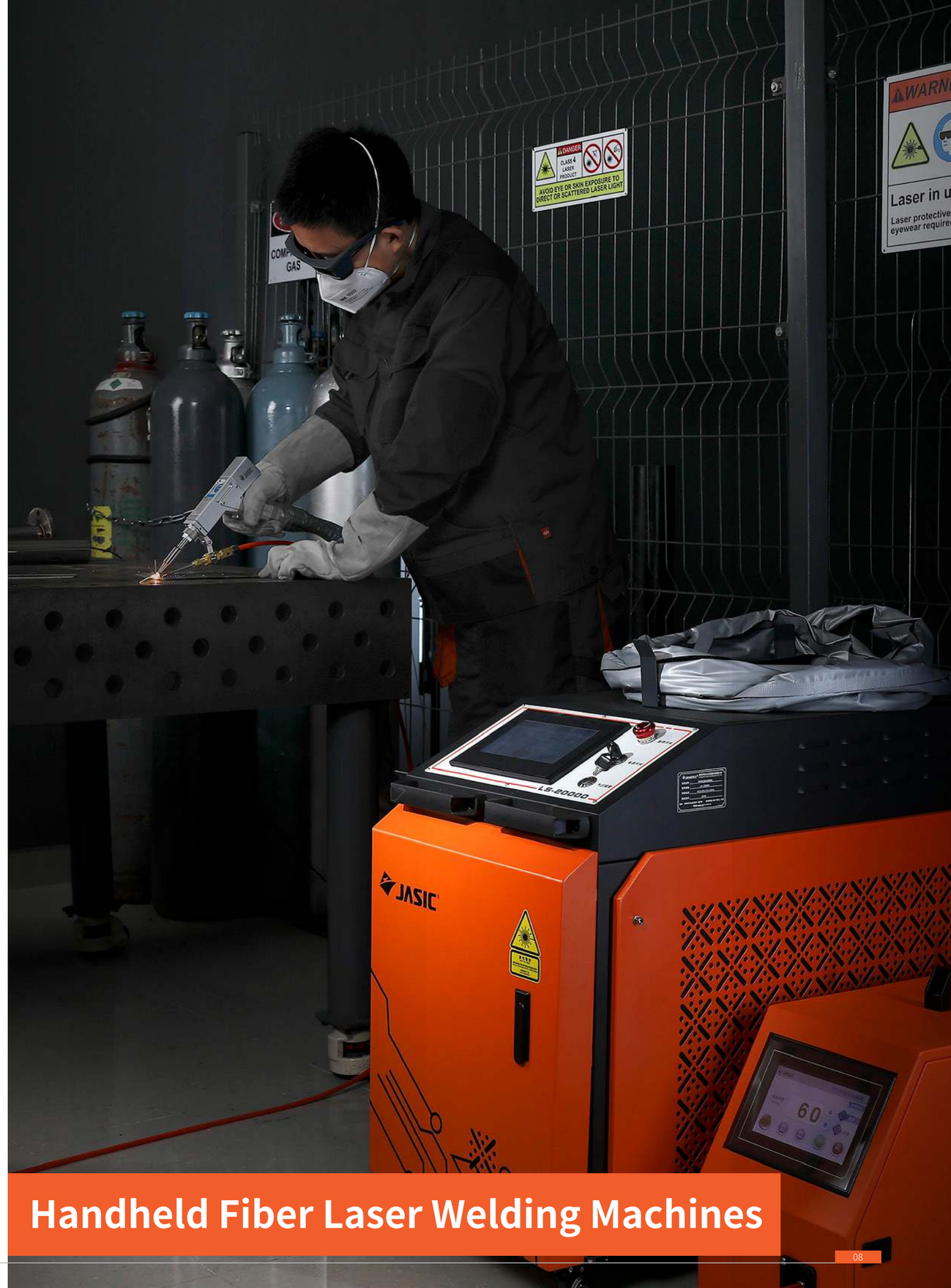
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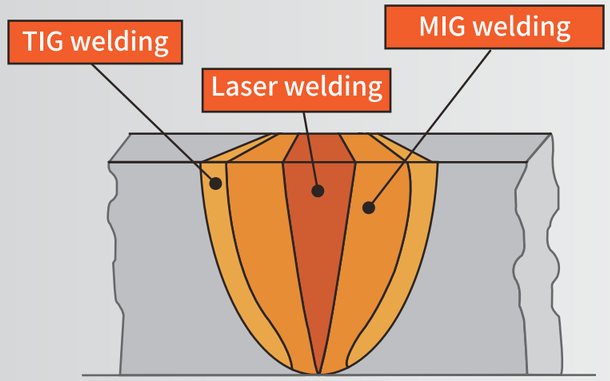


Handheld Fiber Laser Welding Machines

A brief introduction to handheld fiber laser welding

Using laser beam to melt and join metals, this is an emerging manual welding technology that is much more efficient and precise than MIG/TIG with minimal distortion, undercut or burn-though thanks to very limited heat affected zone (HAZ).
It delivers excellent welding results with much less costs compared to manual MIG/TIG welding. As the challenges of metal fabrication industry grow, this new technology can significantly improve fabricators' efficiency and profitability in a competitive landscape where fast project delivery and effective cost control are vital.

Comparison of HAZ











In comparison to other types of welding technologies…

Welding Technology		Arc Welding	Solid YAG Laser	CW Handheld Fiber Laser
Welding experience	Heat input	High	Low	Low
	Distortion	High	Low	Low
	Weld seam formation	Fillet	Fillet	Variable
	Post weld processing	Yes	Yes	No
	Welding speed	Low	Medium	High
	Ease of use	Low	High	High
Sustainability	Hazard to people	High	Low	Low
	Pollution to environment	High	High	Low
Cost	Consumables	Electrode/welding wire/shielding gas	Crystal, Xenon gas	Shielding gas
	Energy efficiency	High	Low	High
	Skill requirement	High	Moderate	Low
	Footprint	Small	Large	Small

Why JASIC handheld fiber laser welding?

High Welding Efficiency

- Up to 10x faster than manual TIG welding
- Very limited spatter thus little post-weld cleaning needed
- Little need for rework thanks to minimal porosity, undercut, or distortion

High Energy Efficiency

- CW(continuous wave) laser with 30+% electro-optical conversion efficiency, 10x that of a solid YAG laser

Cost Efficient

- Low welding skill requirement, save on labor cost for experienced arc welder
- Almost 0 maintenance needed for key component, pump source has over 100k hours life span

High Usability

- Color touch screen control panel with intuitive user interface
- Comprehensive job parameter settings
- Small foot print, great mobility and flexibility

3-Year Warranty

- Comprehensive quality assurance

LS-15000
LS-20000



LS-15000/LS-20000 Handheld laser welding gun



WELDING

Main features

- Low training requirement, much easier to master compared to manual MIG & TIG
- Delivers exceptional welding results at up to 10x faster rate than manual TIG welding
- Minimal spatter, porosity, undercut, or distortion; little need for post-weld cleaning or rework
- Small foot print with great mobility & flexibility; extended work perimeter
- Color touch screen control panel with intuitive interface and comprehensive job parameter settings

Model	LS-15000 (G4J201)	LS-20000 (G4J301)
Input power supply	1PH AC230 V±5%/50 Hz	1PH AC230 V±5%/50 Hz
Input power	7.2 kw	9 kw
Center wave length	1080±10 nm	1080±10 nm
Electro-optical conversion efficiency	⩾30%	⩾30%
Laser power	1500 W	2000 W
Fiber cable length	12 m (9 m exterior)	12 m (9 m exterior)
Welding wire diameter	0.8/1.0/1.2/1.6 mm	0.8/1.0/1.2/1.6 mm
Welding gap range	⩽Welding wire diameter	⩽Welding wire diameter
Shielding gas	Argon, nitrogen, compressed air (cutting)	Argon, nitrogen, compressed air (cutting)
Shielding gas pressure	Welding ＞3 bar, cutting 4-7 bar	Welding ＞3 bar, cutting 4-7 bar
Welding thickness	0.5～5 mm	0.5～6 mm
Penetration	3mm	4.5 mm
Scan width	0～5 mm	0～5 mm
Recommended cutting thickness	3 mm	5 mm
Max cutting thickness	5 mm	6 mm
Cooling method	Water cool	Water cool
Water tank capacity	13 L	13 L
Operating temperature	-10°C～40°C； antifreeze needed when ⩽7°C	-10°C～40°C； antifreeze needed when ⩽7°C
Operating humidity	⩽70% at 40°C; ⩽90% at 20°C	⩽70% at 40°C; ⩽90% at 20°C
Power source weight	103 kg	114.5 kg
Packed weight	147 kg	162 kg
Package weight of wire feeder and accessories	14.7 kg	14.7 kg
Power source dimensions	980 x 420 x 710 mm	980 x 420 x 710 mm
Package dimensions	1060 x 490 x 1470 mm	1060 x 490 x 1470 mm
Package dimensions of wire feeder and accessories	560 x 250 x 400mm	560 x 250 x 400mm

LS-30000D (Dual wire)



LS-30000D Handheld laser welding gun

*: component is subject to change.



WELDING

Main features

- Dual welding wire feeding, higher weld deposition rate, accommodates wider welding gaps
- Low training requirement, much easier to master compared to manual MIG & TIG
- Delivers exceptional welding results at up to 10x faster rate than manual TIG welding
- Minimal spatter, porosity, undercut, or distortion; little need for post-weld cleaning or rework
- Color touch screen control panel with intuitive interface and comprehensive job parameter settings

Model	LS-20000D（G4J309）	LS-30000D（G4J605）
Input power supply	1PH AC230 V±5%/50 Hz	3PH AC380 V±5%/50 Hz
Input power	9 kw	13.5 kw
Center wave length	1080±10 nm	1080±10 nm
Electro-optical conversion efficiency	⩾30%	⩾30%
Laser power	2000 W	3000 W
Fiber cable length	12 m (9 m exterior)	12 m (8～9 m exterior)
Welding wire diameter	0.8/1.0/1.2/1.6 mm	0.8/1.0/1.2/1.6/2 mm
Welding gap range	⩽Welding wire diameter	⩽Welding wire diameter
Shielding gas	Argon, nitrogen, compressed air (cutting)	Argon/nitrogen
Shielding gas pressure	Welding ＞3 bar, cutting 4-7 bar	Welding ＞3 bar
Welding thickness	0.5～6 mm	0.5～10 mm
Penetration	5 mm	5.5 mm
Scan width	0～5 mm	0～5 mm
Recommended cutting thickness	5 mm	8 mm
Max cutting thickness	6 mm	10 mm
Cooling method	Water cool	Water cool
Water tank capacity	13 L	13 L
Operating temperature	-10°C～40°C； antifreeze needed when ⩽7°C	-10°C～40°C；antifreeze needed when ⩽7°C
Operating humidity	⩽70% at 40°C; ⩽90% at 20°C	⩽70% at 40°C; ⩽90% at 20°C
Power source weight	114.5 kg	149 kg
Packed weight	140 kg (only source, separate shipment)	187.5 kg (only source, separate shipment)
Package weight of wire feeder and accessories	33 kg	33 kg
Power source dimensions	980 x 420 x 710 mm	1110 x 530 x 1060 mm
Package dimensions	1075 x 475 x 955 mm (only source, separate shipment)	1220 x 620 x 1135 mm (only source, separate shipment)
Package dimensions of wire feeder and accessories	665 x 335 x 980 mm	665 x 335 x 980 mm

Color LCD touch screen control panel

Intuitive user interface, comprehensive parameter settings



Integrated design with great mobility

Laser source, control unit, and cooling unit are integrated into one compact cabinet with self-locking casters; small footprint, great mobility, plus great flexibility thanks to separated wire feeder

Extended work perimeter - equipped with 12-20m fiber cable, this machine allows users to work well beyond the confine of the laser source.

Double wire feeder (for LS-30000D)
Color LCD touch screen control panel, smooth and stable double wire feeding, enhanced deposition rate



2-roll wire feeder with color touch screen control panel



Self-locking caster

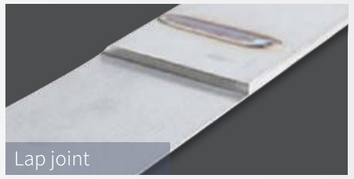
*: component is subject to change.



Compact interior design

Fast and quality welding of different weld joint types


Butt joint


Lap joint


Tee joint


Fillet weld


Round joint


Spot joint

Exceptional welding results

Continuous wave laser beam delivers high quality weld seams with minimal distortion, undercut or burn-though thanks to very limited heat affected zone (HAZ). As a result, very little post weld processing is needed - less labor, shorter delivery time.



Commonly used in…


Sheet metal processing


Moulding industry


Door & windows frame fabrication


Hardware manufacturing industry


Outdoor advertising signage


Water tank fabrication

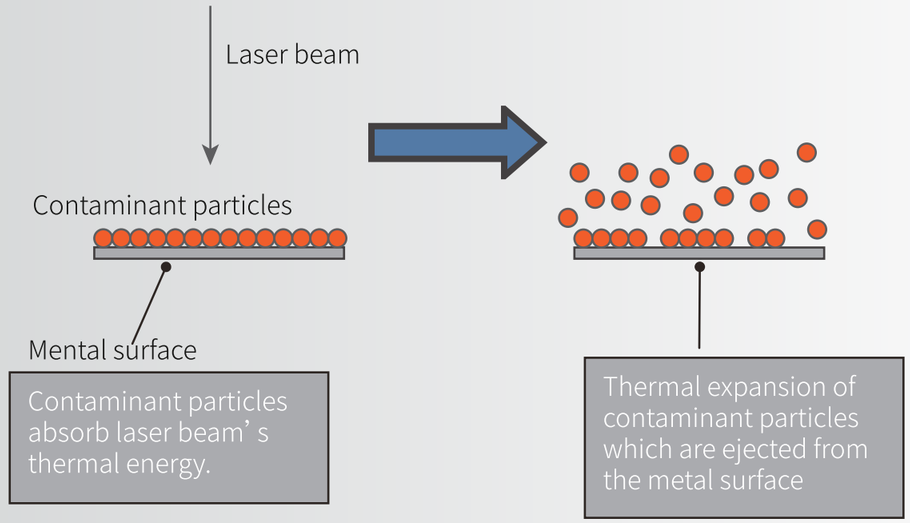

Kitchenware & bathroom accessories fabrication


Decorative lighting fabrication

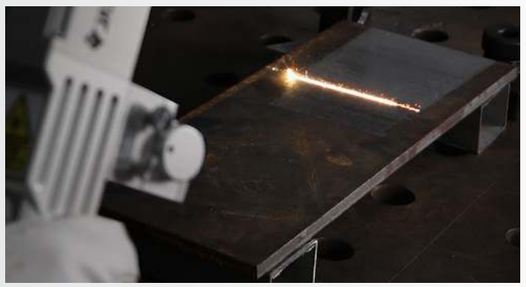
Handheld Fiber Laser Cleaning Machines

How does handheld fiber laser cleaning work?

This an emerging manual metal cleaning technology that uses laser beam to “burn off” rust, oil, coating, and other contaminants from a metal surface. In this process, rapid thermal energy transfer takes place between the laser beam and the contaminant, resulting in rapid thermal expansion of the contaminant particles; the particles are then ejected from the metal surface due to the resulting force caused by the rapid thermal expansion.
Also known as Dry Laser Cleaning, it is a highly effective and efficient cleaning process that requires 0 consumables and generates limited pollution. Thanks to laser’ s characteristics, it can also effortlessly clean cursive surfaces and hard-to-reach spots.







In comparison to other types of metal cleaning technologies…

Method	Laser cleaning	Chemical cleaning	Dry ice cleaning	Mechanical grinding	Ultrasonic cleaning
Environmental hazard	Low	Very high	High	High	Low
Workpiece damage	Low probability	High probability	High probability	High probability	Low probability
Cleaning uniformity	High	Low	Low	Low	Low
Cleaning effiicency	High	Low	Low	Low	High
Precision	High, adjustable	Low, nonadjustable	Low, nonadjustable	Low, nonadjustable	Not applicable
Ease of use	High	Low	High	High	High

Why JASIC handheld fiber laser cleaning machine?

High Cleaning Efficiency

- Cleaning width 300mm, rust cleaning rate 60m²/hour
- Easily cleans hard-to-reach spots, unrestricted by work piece’ s shape

High Energy Efficiency

- CW(continuous wave) laser with 30+% electro-optical conversion efficiency, 10x that of a solid YAG laser

Cost Efficient

- Non-contact cleaning, no damage to work piece’ s surface
- 0 consumables needed, low environmental hazard
- Almost 0 maintenance needed for key component, pump source has over 100k hours life span

High Usability

- Color touch screen control panel with intuitive user interface
- Comprehensive job parameter settings
- Small foot print, great mobility and flexibility

3-Year Warranty

- Comprehensive quality assurance

LS-15000C
LS-20000C



LS-15000C/LS-20000C Handheld laser cleaning gun



Main features

- High cleaning efficiency with 300mm cleaning width, thin rust cleaning rate 60m²/hour
- Non-contact cleaning, no damage to work piece' s surface, 0 consumables needed
- Easily cleans hard-to-reach spots, unrestricted by work piece' s shape
- Quality laser source with 10x electro-optical conversion efficiency than solid YAG laser; pump source has over 100k hours life span
- Wide range of application: removal of metal surface rust, paint, grease, oxide/galvanized layer, and other contaminants

Model	LS-15000C (G4J5)	LS-20000C (G4J4)
Input power supply	1PH AC230 V±5%/50 Hz	1PH AC230 V±5%/50 Hz
Input power	7.2 kW	9 kW
Center wave length	1080±10 nm	1080±10 nm
Electro-optical conversion efficiency	⩾30%	⩾30%
Laser power	1500 W	2000 W
Fiber cable length	12 m (9 m exterior)	12 m (9 m exterior)
Standoff distance	35-40 cm (F400 focusing lens) 55-60 cm (F600 focusing lens) By default: 75-80 cm (F800 focusing lens)	35-40 cm (F400 focusing lens) 55-60 cm (F600 focusing lens) By default: 75-80 cm (F800 focusing lens)
Shielding gas	Argon, nitrogen, compressed air	Argon, nitrogen, compressed air
Shielding gas pressure	＞5 bar	＞5 bar
Scan width	0～150 mm (F400 focusing lens, optional) 0～225 mm (F600 focusing lens, optional) By default: 0～300 mm (F800 focusing lens)	0～150 mm (F400 focusing lens, optional) 0～225 mm (F600 focusing lens, optional) By default: 0～300 mm (F800 focusing lens)
Cooling method	Water cool	Water cool
Water tank capacity	13 L	13 L
Operating temperature	-10°C~+40°C; antifreeze needed when ⩽7°C	-10°C~+40°C; antifreeze needed when ⩽7°C
Operating humidity	⩽70% at 40°C; ⩽90% at 20°C	⩽70% at 40°C; ⩽90% at 20°C
Power source weight	103 kg	114.5 kg
Packed weight	125 kg	140 kg
Power source dimensions	980 x 420 x 710 mm	980 x 420 x 710 mm
Package dimensions	1044 x 474 x 1062 mm	1044 x 474 x 1062 mm

Non-contact cleaning

No damage to work piece's surface

Low environmental hazard

0 consumables or cleaning chemicals needed



Highly flexibile cleaning angles

Easily cleans hard-to-reach spots and areas



Unrestricted by work piece type, efficient cleaning with high precision and uniformity

Narrow space cleaning



Sheet metal cleaning



Interior cleaning



Complex-shaped cleaning



Extended cleaning width

Effortless cleaning with 800mm focal length, maximum cleaning width 300mm



Extended work perimeter with long fiber cable

Equipped with 12-15m fiber cable, this machine allows users to work well beyond the confine of the laser source. Its high precision laser beam can be applied from any angle, allowing user to access hard-to-reach parts of the work piece with ease.





Integrated design with great mobility

Laser source, control unit, and cooling unit are integrated into one compact cabinet with self-locking caster; small footprint, great mobility.





Self-locking caster

*: component is subject to change.



Compact interior design

Wide range of application

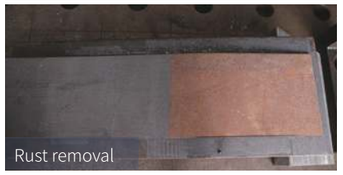
- Metal surface rust removal, paint removal (e.g. in shipbuilding, automotive, machine manufacturing)
- Removal of oxide/galvanized layer on metal (e.g. in welding seam cleaning, pre-weld processing of galvanized plate and aluminum alloy, etc.)
- Removal of grease and other contaminants (e.g. for molds, kitchenware, precision parts, etc.)


Grease removal


Metal parts cleaning


Weld seam cleaning


Mold cleaning


Rust removal


Brake pad cleaning


Stainless Steel Cleaning


Locomotive rail maintenance


Oxide layer removal

Used in a wide range of industries


Shipbuilding


Environmental industry


Heavy machinery manufacturing


Automotive parts manufacturing


Railroad maintenance


Construction industry


Moulding industry


Utensil industry


Nuclear power industry





3 In 1 - Welding/Cutting/Cleaning

LS-15000M
LS-20000M
LS-30000M



LS-15000M/LS-20000M Handheld laser welding gun



3 IN 1

Main features

- Versatile - welding/cutting/cleaning, covers most thin sheet metal fabrication needs
- Rapid and cost-efficient welding/cutting/cleaning, little need for further treatments
- Low training requirement, much easier to master compared to manual MIG, TIG, & plasma cutting
- Small foot print with great mobility & flexibility; extended work perimeter
- Quality laser source with 10x electro-optical conversion efficiency than solid YAG laser; pump source has over 100k hours life span

Model		LS-15000M (G4J201B04)	LS-20000M (G4J301B05)	LS-30000M (G4J604)
Input power supply		1PH AC230 V±5%/50 Hz	1PH AC230 V±5%/50 Hz	3PH AC380 V±5%/50 Hz
Input power		7.2 kw	9 kw	13.5 kw
Center wave length		1080±10 nm	1080±10 nm	1080±10 nm
Electro-optical conversion efficiency		⩾30%	⩾30%	⩾30%
Laser power		1500 W	2000 W	3000 W
Fiber cable length		12 m (9 m exterior)	12 m (9 m exterior)	12 m (8～9 m exterior)
Cooling method		Water cool	Water cool	Water cool
Welding	Scan width	0～5 mm	0～5 mm	0～5 mm
	Welding wire diameter	0.8/1.0/1.2/1.6 mm	0.8/1.0/1.2/1.6 mm	0.8/1.0/1.2/1.6 mm
	Shielding gas	Argon/nitrogen（welding ＞3 bar）	Argon/nitrogen（welding ＞3 bar）	Argon/nitrogen（welding ＞3 bar）
	Welding thickness	0.5～5 mm	0.5～6 mm	0.5～8 mm
	Penetration	3 mm	4.5 mm	5.5 mm
	Welding gap range	⩽Welding wire diameter	⩽Welding wire diameter	⩽Welding wire diameter
Cutting	Recommended cutting thickness	3 mm	5 mm	8 mm
	Max cutting thickness	⩽5 mm	⩽6 mm	⩽10 mm
	Shielding gas	Argon, nitrogen, compressed air (＞5 bar)	Argon, nitrogen, compressed air (＞5 bar)	Argon, nitrogen, compressed air (＞5 bar)
Cleaning	Standoff distance	15 cm (F150 focusing lens) 40 cm (F400 focusing lens)	15 cm (F150 focusing lens) 40 cm (F400 focusing lens)	15 cm (F150 focusing lens) 40 cm (F400 focusing lens) 80 cm (F800 focusing lens)
	Max. cleaning width	20 mm (F150 focusing lens) 40 mm (F400 focusing lens)	20 mm (F150 focusing lens) 40 mm (F400 focusing lens)	30 mm F150 focusing lens) 70 mm (F400 focusing lens) 120 mm (F800 focusing lens)
Water tank capacity		13 L	13 L	13 L
Operating temperature		-10°C～40°C; antifreeze needed when ⩽7°C	-10°C～40°C; antifreeze needed when ⩽7°C	-10°C～40°C; antifreeze needed when ⩽7°C
Operating humidity		⩽70% at 40°C; ⩽90% at 20°C	⩽70% at 40°C; ⩽90% at 20°C	⩽70% at 40°C; ⩽90% at 20°C
Power source weight		103 kg	103 kg	149 kg
Packed weight		147 kg	162 kg	187.5 kg (only source, separate shipment)
Package weight of wire feeder and accessories		14.7 kg	14.7 kg	14.7 kg
Power source dimensions		980 x 420 x 710 mm	980 x 420 x 710 mm	1110 x 530 x 1060 mm
Package dimensions		1060 x 490 x 1470 mm	1060 x 490 x 1470 mm	1220 x 620 x 1135 mm (only source, separate shipment)
Package dimensions of wire feeder and accessories		560 x 250 x 400 mm	560 x 250 x 400 mm	1000 x 320 x 480mm

3-in-1 handheld fiber laser machine

Being a turnkey solution for fast sheet metal fabrication, this system combines laser welding, cutting and cleaning into one system. On top of its versatility, this 3-in-1 system also possesses the same characteristics in efficiency and in ease-of-use as the other 2 types of machines.



Welding

Rapid and consistent weld seam formation, limited training and little post-weld cleaning needed



Cutting

Switch to cutting mode by simply changing nozzle tip; fast and clean cutting of sheet metal, straight or cursive

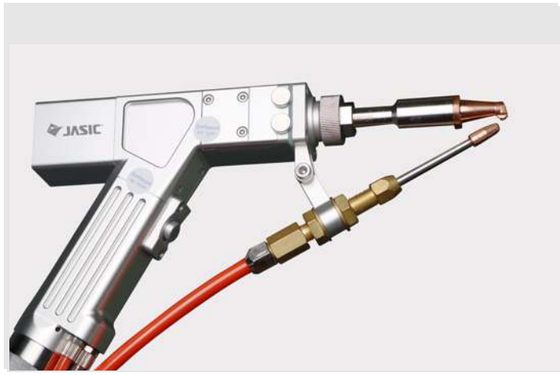


Cleaning

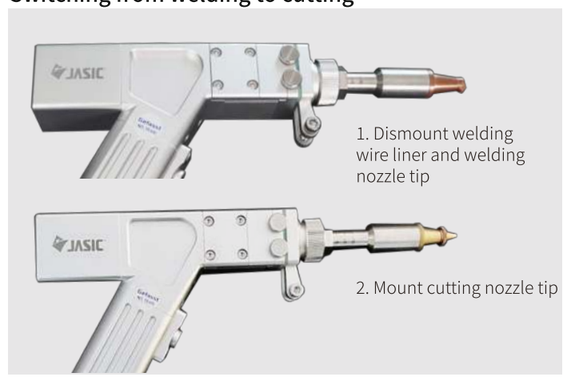
Switch to cleaning mode by changing lens and operation mode; rapid and thorough removal of rust/paint/grease, etc., easily cleans hard-to-reach spots

Simple lens change method

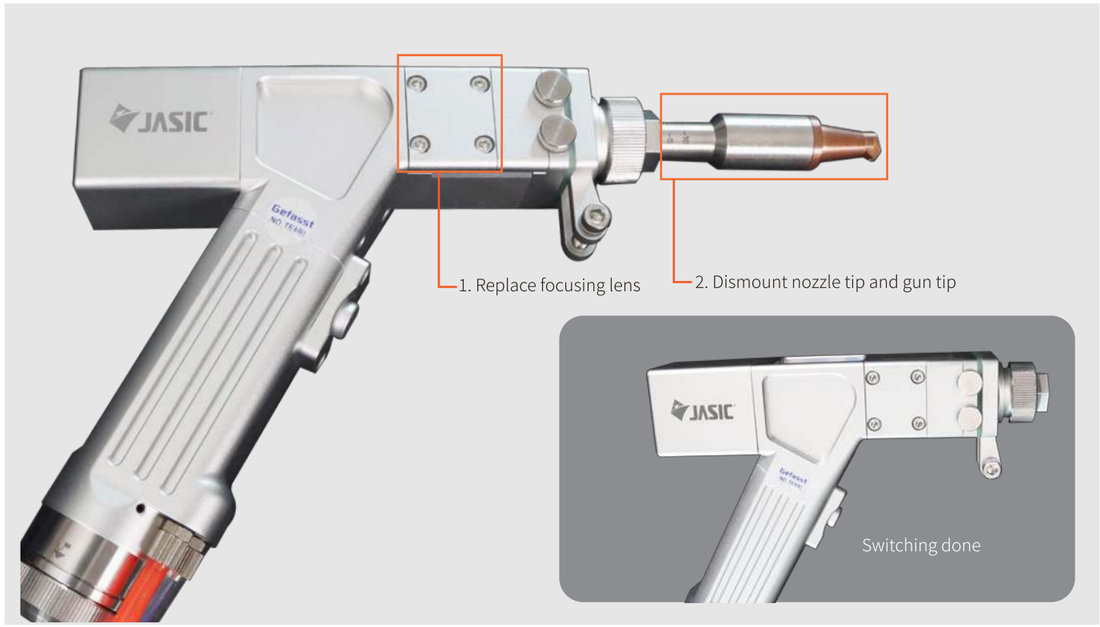
The handheld laser gun is by default delivered in welding mode.



Switching from welding to cutting



Switching from welding to cleaning



Cutting performance
Precise laser cutting with smooth cut surface

Refined heat input results in cut surface with limited striation, great cutting results in both straight and cursive cutting

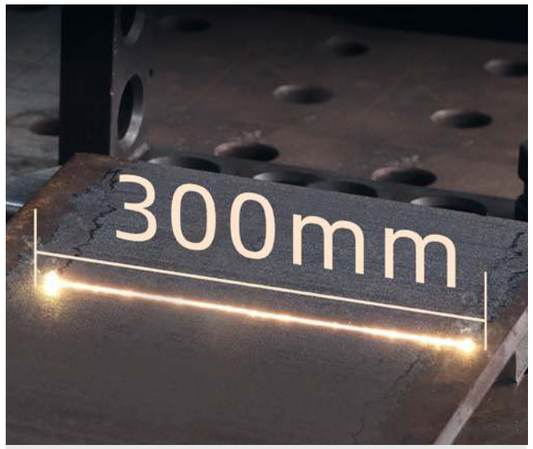




- Easy operation with high cutting efficiency
- Precise cutting, tiny kerf width
- Wide range of applicable sheet metal

3 IN 1

Cleaning - different models for different job situation



LS-15000C LS-20000C

- Focal length 800mm, standoff distance 75-80cm
- Max. cleaning width 300mm
- Ideal for fast cleaning of large area
- Good for operating in standing position



LS-15000M LS-20000M

- Focal length 400mm, standoff distance 35-40cm
- Max. cleaning width 40mm
- Ideal for precise cleaning, e.g. pre-cleaning of weld bead & small parts cleaning
- Good for operating in sitting or squatting position

Commonly used in…


Sheet metal processing


Moulding industry


Door & windows frame fabrication


Hardware manufacturing industry


Outdoor advertising signage


Water tank fabrication


Kitchenware & bathroom accessories fabrication


Decorative lighting fabrication

Quick selection guide

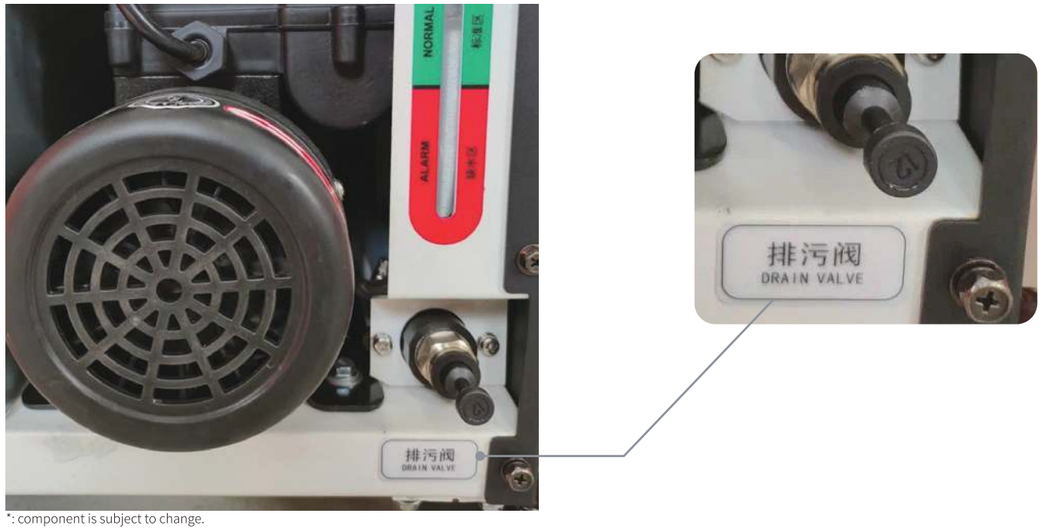
Type	Model	Welding	Cutting	Cleaning
Welding	LS-15000	Recommended workpiece thickness: 0.5~5 mm	Recommended workpiece thickness: 3 mm	/
	LS-20000	Recommended workpiece thickness: 0.5~6 mm	Recommended workpiece thickness: 5 mm	/
	LS-20000D	Recommended workpiece thickness: 0.5~6 mm	Recommended workpiece thickness: 5 mm	/
	LS-30000D	Recommended workpiece thickness: 0.5~10 mm	Recommended workpiece thickness: 8 mm	/
Cleaning	LS-15000C	/	/	Focal length 800mm, cleaning width3 00mm
	LS-20000C	/	/	Focal length 800mm, cleaning width 300mm
3 In 1	LS-15000M	Recommended workpiece thickness: 0.5~5 mm mm	Recommended workpiece thickness: 3 mm	Focal length 400mm, cleaning width 40mm
	LS-20000M	Recommended workpiece thickness: 0.5~6 mm mm	Recommended workpiece thickness: 5 mm	Focal length 400mm, cleaning width 40mm
	LS-30000M	Recommended workpiece thickness: 0.5~8 mm	Recommended workpiece thickness: 8 mm	Focal length 400mm, cleaning width 40mm

On the use of antifreeze

It is important to use antifreeze for our handheld fiber laser machines as using the machines without proper antifreeze measures under ＜7°C working temperature can cause malfunction or even damage*.
*: damage of JASIC handheld fiber laser machines caused by the absence of or the improper use of antifreeze agent is not covered by JASIC' s 3-year warranty

Tips on using antifreeze

・Keep working temperature above 7°C;
・Keep water cooler running, set the low and normal temperatures of cooling water to around 7°C to make sure the temperature of the coolant is above freezing point;
・Drain* cooling water out of the machine after use and add antifreeze coolant to ensure liquid circulation;
・Use antifreeze with freezing point slightly lower than the lowest local working temperature
*: Location of the drain valve



*: component is subject to change.

Choosing the right antifreeze

It is recommended to choose antifreeze with lowest freezing point slightly lower than lower than the lowest local working temperature. Recommended brand for antifreezes: Clariant.

Antifreeze & distilled water proportion table	
Proportion ratio（antifreeze: distilled water)	Effective temperature range
6:4	-42°C~-45°C
5:5	-32°C~-35°C
4:6	-22°C~-25°C
3:7	-12°C~-15°C
2:8	-2°C~-5°C

Notice

・Antifreeze cannot be used to replace deionized water for year-long use;
・After winter, use deionized water or distilled water to clean pipes and resume use of it as the coolant.
・If possible, we recommend keeping water cooler running in a secured environment or modifying the piping circuit to simplify the drainage of coolant;
・It is recommended to regularly check coolant quality in the water tank, and it is best to change the coolant once in a month;
・We also recommend adding 5-10% absolute ethanol to effectively keep the coolant sterilized.

General Aftersales Policies

As a welding manufacturer with comprehensive quality assurance, we provide the following warranties for our handheld fiber laser welding machines:

・36 months warranty on the whole machine
・36 months warranty on the laser generator
・36 months warranty on the water cooler
・36 months warranty on the laser welding gun

Please note: the following items/situations are not covered by the warranty.
・Wearing parts and optical lenses are excluded from the warranty
・Product damage or quality issues caused by improper operation or mishandling are excluded from the warranty
・Product damage or quality issues caused by unauthorized repairs using third party parts are excluded from the warranty
・Damage caused by operation outside the scope of the product's technical requirements
・Damage to the laser caused indirectly by faults due to the customer's software or interface
・Damage caused by incorrect installation, maintenance/repair or operational use not specified in the user manual
・Damage caused by human factors during use, especially due to failure to take the necessary antifreeze measures when needed
・Damage caused by failure to comply with relevant requirements on water cooler's maintenance specified in the user manual